material, such as, for example, polyethylene. It should be understood that metal springs may alternatively or additionally be used. The illustrated spring member 21100 is formed of an elastomeric material, for example. The illustrated spring member 21100 is ring-shaped, for example, such that it fits just inside the circumferential edge of the outwardly facing surface 21020b of the second baseplate second part 21000b as shown. The second baseplate second part 21000b should be dimensioned such that, and the spring member 21100 should have an uncompressed height such that, a gap is present between the outwardly facing surface 21020b of the second baseplate second part 21000b and the inwardly facing surface 21090a of the second baseplate first part 21000a when the disc is assembled. The gap preferably has a height equivalent to the anticipated distance that the spring member 21100 will compress under an anticipated load. Accordingly, in this alternate first preferred embodiment, part or all of a compressive load applied to the baseplates will be borne by the spring member 21100, which will dampen the load and/or absorb the load and preferably help return the baseplates to their original uncompressed relative positions.

[0215] While there has been described and illustrated specific embodiments of an artificial disc, it will be apparent to those skilled in the art that variations and modifications are possible without deviating from the broad spirit and principle of the invention. The invention, therefore, shall not be limited to the specific embodiments discussed herein.

CLAIMS

1. An intervertebral spacer device, comprising:

a first baseplate, having an outwardly facing surface and an inwardly facing surface, the inwardly facing surface having

a central hole;

a second baseplate, having an outwardly facing surface and an integrated convex structure, the convex structure including a curvate pocket, the convex structure's curvate pocket being formed by a central portion of an outwardly facing surface of the convex structure concaving inwardly to define a semispherical contour, the convex structure's curvate pocket further having an apex at a center of the convex structure's curvate pocket's semispherical contour, the convex structure further having a bore through the convex structure's curvate pocket's apex from the convex structure's outwardly facing surface to the convex structure's inwardly facing surface, the second baseplate having on its outwardly facing surface an access hole leading to the convex structure's curvate pocket;

a post having a longitudinal axis, a tail end, and a head end having a ball defining a spherical contour;

a cap having a first part and a second part, the first part having an inwardly facing surface and a curvate pocket having a semispherical contour, the cap's curvate pocket being formed by a central portion of the cap's inwardly facing surface concaving outwardly; and

a spring member; wherein

the tail end is disposable through the access hole and through the bore, and the head end is disposable through the access hole and prevented from passage through the bore, such that the ball is seatable in the convex structure's curvate pocket; and wherein

the tail end is securable in the central hole; and wherein

the first part of the cap is disposed such that the cap's curvate pocket's semispherical contour opposes the convex structure's curvate pocket's semispherical contour such that

the semispherical contours together define a curvate socket defining a spherical contour that closely accommodates the ball's spherical contour for rotation and angulation of the ball in the curvate socket about a central portion of the ball, and such that the post is accommodated for rotation in the bore about the longitudinal axis as the ball rotates in the curvate socket, and such that the post is accommodated for angulation in the bore about the ball's central portion as the ball angulates in the curvate socket; and wherein

the spring member is disposed between the first part of the cap and the second part of the cap, and the second part of the cap is securable to the second baseplate, such that a compressive load applied to the outwardly facing surfaces of the baseplates is borne by the spring member.

2. The intervertebral spacer device of claim 1, wherein each of the inwardly facing surface of the first baseplate and the inwardly facing surface of the convex structure has a respective perimeter region, and the perimeter regions have corresponding contours that reduce surface wearing during rotation and angulation of the ball in the curvate socket.

3. The intervertebral spacer device of claim 1, wherein the access hole is surrounded by a circular recess, and the second part of the cap is securable in the circular recess.

4. The intervertebral spacer device of claim 1, wherein the second part of the cap is compression lockable to the second baseplate.

5. The intervertebral spacer device of claim 1, wherein the bore is tapered to a larger diameter toward the convex structure's inwardly facing surface, and the post is

accommodated, by the bore being tapered, for angulation in the bore about the ball's central portion as the ball angulates in the curvate socket.

6. The intervertebral spacer device of claim 1, wherein at least one of the curvate pockets has a hemispherical contour.

7. The intervertebral spacer device of claim 1, wherein the second part of the cap has an outwardly facing surface and at least one of the second part of the cap and the first baseplate includes an osteoinductive vertebral body contact surface on its outwardly facing surface.

8. The intervertebral spacer device of claim 1, wherein the tail end is compression lockable into the central hole.

9. An intervertebral spacer device, comprising:

a first baseplate, having an outwardly facing surface and an inwardly facing surface, the inwardly facing surface having a central post secured thereto, the post having a longitudinal axis and a ball at a head end of the post that is inwardly directed toward the second baseplate, the ball defining a spherical contour;

a second baseplate, having an outwardly facing surface and an inwardly facing surface, the second baseplate including a convex structure integral therewith and a cap secured thereto, the convex structure and the cap together establishing a curvate socket communicating with a central bore through the convex structure, the curvate socket defining a spherical contour; wherein

the ball is capturable in the curvate socket, with the curvate socket's spherical contour accommodating the ball's

spherical contour for rotation and angulation of the ball in the curvate socket about a central portion of the ball; and

with the central bore accommodating the post for rotation in the central bore about the longitudinal axis as the ball rotates in the curvate socket, and accommodating the post for angulation in the central bore about the ball's central portion as the ball angulates in the curvate socket; and further comprising

a spring member housed by the cap such that a compressive load applied to the outwardly facing surfaces of the baseplates is borne by the spring member.

10. The intervertebral spacer device of claim 9, wherein each of the convex structure and the cap has a respective curvate pocket, the second baseplate has an access hole leading to the convex structure's curvate pocket and accommodating passage of the post and the ball for seating of the ball in the convex structure's curvate pocket with the post disposed in the central bore, and the cap is secured to the second baseplate such that the curvate pockets of the convex structure and the cap oppose one another to define the curvate socket.

11. The intervertebral spacer device of claim 10, wherein the access hole is surrounded by a circular recess, and the cap is secured in the circular recess.

12. The intervertebral spacer device of claim 10, wherein the cap is compression locked to the second baseplate.

13. The intervertebral spacer device of claim 10, wherein at least one of the curvate pockets has a hemispherical contour.

14. The intervertebral spacer device of claim 9, wherein each of the inwardly facing surface of the first baseplate and the inwardly facing surface of the second baseplate has a respective perimeter region, and the perimeter regions have corresponding contours that reduce surface wearing during rotation and angulation of the ball in the curvate socket.

15. The intervertebral spacer device of claim 9, wherein the central bore is tapered to a larger diameter toward the second baseplate's inwardly facing surface, and the post is accommodated, by the central bore being tapered, for angulation in the central bore about the ball's central portion as the ball angulates in the curvate socket.

16. The intervertebral spacer device of claim 9, wherein the cap has an outwardly facing surface and at least one of the first baseplate and the cap has an osteoinductive vertebral body contact surface on its outwardly facing surface.

17. An artificial intervertebral disc, comprising:

a first baseplate, having an outwardly facing surface and an inwardly facing surface, the inwardly facing surface having a central hole;

a second baseplate, having an outwardly facing surface and an inwardly facing surface;

an inwardly directed convex structure integral with the second baseplate, the convex structure forming a curvate pocket having a semispherical contour on the second baseplate's outwardly facing surface, the convex structure further having a bore aligned with the central hole and passing from the convex structure's curvate pocket to the

second baseplate's inwardly facing surface;

a ball at a head end of a post, the ball being seatable in the convex structure's curvate pocket with the post disposed through the bore, the post having a tail end securable in the central hole; and

a cap forming a curvate pocket having a semispherical contour, the cap being securable to the second baseplate with the cap's curvate pocket opposing the convex structure's curvate pocket to form a curvate socket within which the ball is rotatable and angulatable about a central portion of the ball, the cap housing a spring member such that a compressive load applied to the outwardly facing surfaces of the baseplates is borne by the spring member.

18. The intervertebral spacer device of claim 17, wherein each of the inwardly facing surface of the first baseplate and the inwardly facing surface of the second baseplate has a respective perimeter region, and the perimeter regions have corresponding contours that reduce surface wearing during rotation and angulation of the ball in the curvate socket.

19. The artificial intervertebral disc of claim 17, wherein each of the inwardly facing surface of the first baseplate and the inwardly facing surface of the second baseplate has a respective perimeter region, and the ball's curvate recess's boundaries accommodate angulation of the ball within the curvate socket at least until the perimeter regions meet, and wherein the bore is tapered to a larger diameter toward the inwardly facing surface of the second baseplate, and wherein the post is accommodated, by the bore being tapered, for angulation in the bore about the ball's central portion, as the ball angulates in the curvate socket, at least

until the perimeter regions meet.

20. The artificial intervertebral disc of claim 17, wherein the cap has an outwardly facing surface and at least one of the first baseplate and the cap has an osteoinductive vertebral body contact surface on its outwardly facing surface.